Remarks

Preliminary comments

During the prosecution of this case, involving at least nine office actions, amendments have been repeatedly made to the

5   original claims. As a result, the orginal claims were unduly burdened by redundancy and confusing or indefinite terminology, as has been appropriately and accurately pointed out by Examiner.

Consequently, the present paper cancels the original claims and re-drafts those claims as new claims submitted here for

10   Examiner's consideration. Any narrowing amendments to the claims made during this prosecution have been retained; however, the language and the formatting of the claims have been modified as necessary to make the claims more comprehensible.

The undersigned gratefully acknowledges Examiner's efforts to

15   bring the multiple problems with the claims to the applicants' attention.

What follows are claim-by-claim comments to point out how the new claims correspond to the original claims and how Examiner's rejections are overcome.

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Substantive comments and grounds for traverse

Claim 1 (new Claim 16)

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 4

Status

- Claim 1 stands objected to and rejected under 35 USC § 112, second paragraph for the reasons set forth in paragraphs 2, 4, and 5 of OA9.

- In response to OA9 Claim 1 has been re-written as Claim 16 in order to remove grounds for Examiner's objections and § 112 rejections.

- Applicant respectfully submits that Claim 16 overcomes all objections and grounds for rejection of Claim 1, and is now in condition for allowance.

Amendments

- New Claim 16 is Claim 1 re-worded and reorganized in order to more precisely and more clearly define the claimed subject matter and to remove the grounds for rejection under § 112. Former step (b) has been particularly re-worked to overcome problems identified by Examiner.

- The limitation of the control information comprising control words has been moved from step (a) into the preamble.

- The claim has been re-worded to avoid the "between . . .to" language objected to at page 2 of OA9.

- With respect to the § 112 rejection at page 3 of OA9 regarding line 12 and line 13 of Claim 1, the undersigned

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 5

agrees with Examiner. Support for aligning the data lines and for data starting and arriving at the same time is not evident in the specification. Applicant amends the claim to refer to the "alignment" of data, which finds support at [0016] and [0082] of the published application.

- With respect to the § 112 rejection at page 3 of OA9 regarding line 13 of Claim 1, the reference to "signals" has been removed.

- With respect to the § 112 rejection at page 3 of OA9 regarding line 13 of Claim 1, references to "physical lines" have been replaced with "physical path," which has support in the claim and antecedent basis in the specification.

- With respect to the § 112 rejection at page 3 of OA9 regarding line 14 of Claim 1, use of "that comprise" has been eliminated by the re-wording. In addition, the run-on limitation noted by Examiner has been resolved.

- With respect to the § 112 rejection at page 4 of OA9 regarding line 19 of Claim 1, use of "packet destination" has been eliminated as being redundant to "port." Furthermore, the undersigned was unable to find antecedent support for "each port" in Claim 1. Consequently, Claim 16 now sets forth a separate step, Step (e) of granting the credits to

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 6

ports. This additional step does not change the subject matter of Claim 1 or broaden the claim because it is buried in step (b) of Claim 1.

Claim 3 (new Claim 17)

Status

- Claim 3 stands rejected as depending from rejected base claim, Claim 1.

- Claim 3 has been re-written as Claim 17 in order to comply with OA9.

- Applicant respectfully submits that Claim 17 is in condition for allowance as depending from an allowable base claim.

Amendments

- The language of this claim has been modified in order to explicitly claim the step, thereby clarifying the meaning and scope of the claim.

Claim 4 (new Claim 18)

Status

- Claim 4 stands rejected as depending from rejected base claim, Claim 1.

- Claim 4 has been re-written as Claim 18 in order to comply

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 7

with OA9.

- Applicant respectfully submits that Claim 18 is in condition for allowance as depending from an allowable base claim.

Amendments

- The language of this claim has been modified in order to claim the individual steps explicitly and to remove the unnecessary catalog of reasons for skew variation.

Claim 5 (new Claim 20)

Status

- Claim 5 stands rejected as depending from a rejected base claim.

- Claim 5 has been re-written as Claim 20 in order to comply with OA9.

- Applicant respectfully submits that Claim 20 is in condition for allowance as depending from an allowable base claim.

Amendments

- The sequence of original Claims 5 and 6 has been altered to allow previous Claim 4 and its dependent, previous Claim 6, to be placed together as new Claims 18 and 19.

- Claim 20 replaces the phrase "using a clock in a direction opposite" with "transmitting a clock signal in a direction

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 8

opposite" in order to resolve potential ambiguity with respect to the Claim 5 language "according to claim 1, using a clock in a direction", which appears to be questionable form for a methods claim.

Claim 6 (new Claim 19)

Status

- Claim 6 stands objected to for the reasons stated at page 2 of OA9 and rejected under § 112, second paragraph for the reasons stated at pages 2 and 4 of OA9.

- Claim 6 has been re-written as Claim 19 in order to comply with OA9.

- Applicant respectfully submits that Claim 19 overcomes all objections and grounds for rejection of Claim 6, and is now in condition for allowance.

Amendments

- The phrase "data and control information" has been replaced with "the data and the control information" as suggested by Examiner at page 3 of OA9.

- The § 112 grounds for rejection set forth at pages 1 and 3 of OA9 are overcome. "MAX_T" has been replaced in Claim 19 with "intervals". MAX_T is not precisely defined in the

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 9

specification, but one of skill in the art would recognize the phrase "at least once every MAX_T, wherein MAX_T is configurable on start-up" as referring to intervals. See paragraphs [0016] and [0083] of the published application.

Claim 7 (new Claim 21)

Status

- Claim 7 stands rejected as depending from a rejected base claim.

- Claim 7 has been re-written as Claim 21 in order to comply with OA9.

- Applicant respectfully submits that Claim 21 is in condition for allowance as depending from an allowable base claim.

Amendments

- The language of original Claim 7 has been modified to comport with traditional claim language and to eliminate redundancy.

- Claim 21 eliminates the phrase "said control information has a plurality of control words". That limitation is redundant because it already appears in the base claim, Claim 16.

- Claim 21 claims "inserting" as an explicit step for greater clarity.

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 10

Claim 8 (new Claim 22)

Status

- Claim 8 stands rejected as depending from a rejected base claim.

5 - Claim 8 has been re-written as Claim 22 in order to comply with OA9.

- Applicant respectfully submits that Claim 22 is in condition for allowance as depending from an allowable base claim.

Amendments

10 - Claim 22 claims the "combining" explicitly as a step for greater clarity.

- The implied "whereby" clause "to reduce the number of bits required and so maintain a performance of code" has been removed as claiming a result and because it appears to lack

15 support in the specification.

Claim 10 (new Claim 23)

Status

- Claim 10 stands rejected as depending from a rejected base

20 claim.

- Claim 10 has been re-written as Claim 23 in order to comply with OA9.

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 11

- Applicant respectfully submits that Claim 23 is in condition for allowance as depending from an allowable base claim.

Amendments

- Claim 23 more clearly and explicitly enumerates the claimed limitations of the control word. "Control word" has antecedent support in the preamble of the parent claim, Claim 16.

- Claim 23 clarifies the relationship between control information and control word, as set forth in the preamble of Claim 16.

Claim 12 (new Claim 24)

Status

- Claim 12 stands rejected as depending from a rejected base claim.

- Claim 12 has been re-written as Claim 24 in order to comply with OA9.

- Applicant respectfully submits that Claim 24 is in condition for allowance as depending from an allowable base claim.

Amendments

- Claim 24 resolves an indefinite use of the plural, as in "second layer devices", whereas the base claim claims "a

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 12

second layer device."

- Claim 24 resolves a redundancy by eliminating the phrase "that transmits data to said PHY device, . . . receives data from said PHY device." The base claim already claims the transmission of data to and from the two layer devices.

Claim 13 (new Claim 25)

Status

- Claim 13 stands rejected as depending from a rejected base claim.

- Claim 13 has been re-written as Claim 25 in order to comply with OA9.

- Applicant respectfully submits that Claim 25 is in condition for allowance as depending from an allowable base claim.

Amendments

- Claim 24 employs traditional "comprises" language to more clearly claim the limitations of the in-band portion, the out-of-band portion, and the interface.

Claim 14 (new Claim 26)

Status

- Independent Claim 14 stands allowed.

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 13

- Claim 14 has been re-written as Claim 25 to include minimal changes in language and word-usage in order to employ more customary claim language and to eliminate possible redundancies.

5

- Applicant respectfully submits that Claim 26 is in condition for allowance for the reasons set forth in OA9 with respect to Claim 14.

Amendments

- A redundancy in twice limiting "M" as an integer has been

10

resolved.

- Customary "wherein" language has been employed to clarify the limitations.

New Claim 27

15

Status

- New Claim 27 has been added as a dependent of Claim 26 in order to explicitly claim the preferred embodiment of the de-skewing circuit where M is equal to 17, as disclosed in the specification.

20

- Applicant respectfully submits that Claim 27 is in condition for allowance.

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 14

Claim 15 (new Claim 28)

Status

- Independent Claim 15 stands rejected under § 112 on the

  ground that the term "bit time" found at line 28 of Claim 15

5   is indefinite.

- The rejection of Claim 15 is here traversed.

- Applicant respectfully submits that the rejection of Claim 15

  is overcome by the traversal and that Claim 28 is in

  condition for allowance.

10   Grounds for traverse

- Applicant respectfully traverses this rejection on the

  following grounds.

- The term "bit time" has sufficient and significant support in

  the specification, c.f., paragraph [0082] of the published

15   application.

- The term "bit time" is well known and widely understood in

  the field, and one of skill in the art would know immediately

  what the term means. For instance, the online encyclopedia

  Wikipedia defines "bit time" as follows:

20   "Bit time is a concept in computer networking. It is
      defined as the time it takes for one bit to be ejected
      from a Network Interface Card (NIC) operating at some
      predefined standard speed, such as 10 Mbit/s. The time is
      measured between the time the logical link control layer
25   2 sublayer receives the instruction from the operating

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 15

system until the bit actually leaves the NIC. The bit time has nothing to do with the time it takes for a bit to travel on the network medium, but has to do with the internals of the NIC."
http://en.wikipedia.org/wiki/Bit_time   Last visited, Sep24.2009.

Amendments

— Claim 28 is Claim 15 rewritten to more clearly and precisely state the claimed subject matter.

— Claim 28 claims the general case of N-bit data path in the manner claimed in allowed Claim 14 and as disclosed in the specification.

— Instances of inferential claiming and redundancies are eliminated. For instance, "respective input data lines of 17 input lines which transmit serial data" has been replaced with "serial input data lines".

New Claim 29

Status

— New Claim 29 has been added as a dependent of independent Claim 28 in order to explicitly claim the preferred embodiment of the de-skewing circuit where N is equal to 17, as disclosed in the specification.

— Applicant respectfully submits that Claim 29 is in condition

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Application 09/756,680
Response to Office Action of June 29, 2009

Page 16

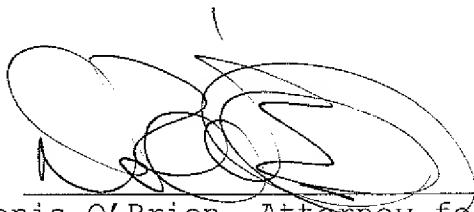for allowance as depending from an allowable base claim.

Summary

Applicants respectfully submit that i) Claims 16-29 claim subject that is useful, novel, and non-obvious, ii) they claim over the art, and iii) they meet all requirements of the Patent Act, including § 112.

Wherefore, the applicants respectfully request that this application be passed to allowance and that letters patent be issued hereon.

Respectfully submitted,
Richard Cam et al., applicants

Date: Oct 06. 2009   by: _____
Denis O'Brien, Attorney for Applicants
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Application 09/756,680
Response to Office Action of June 29, 2009

Page 17